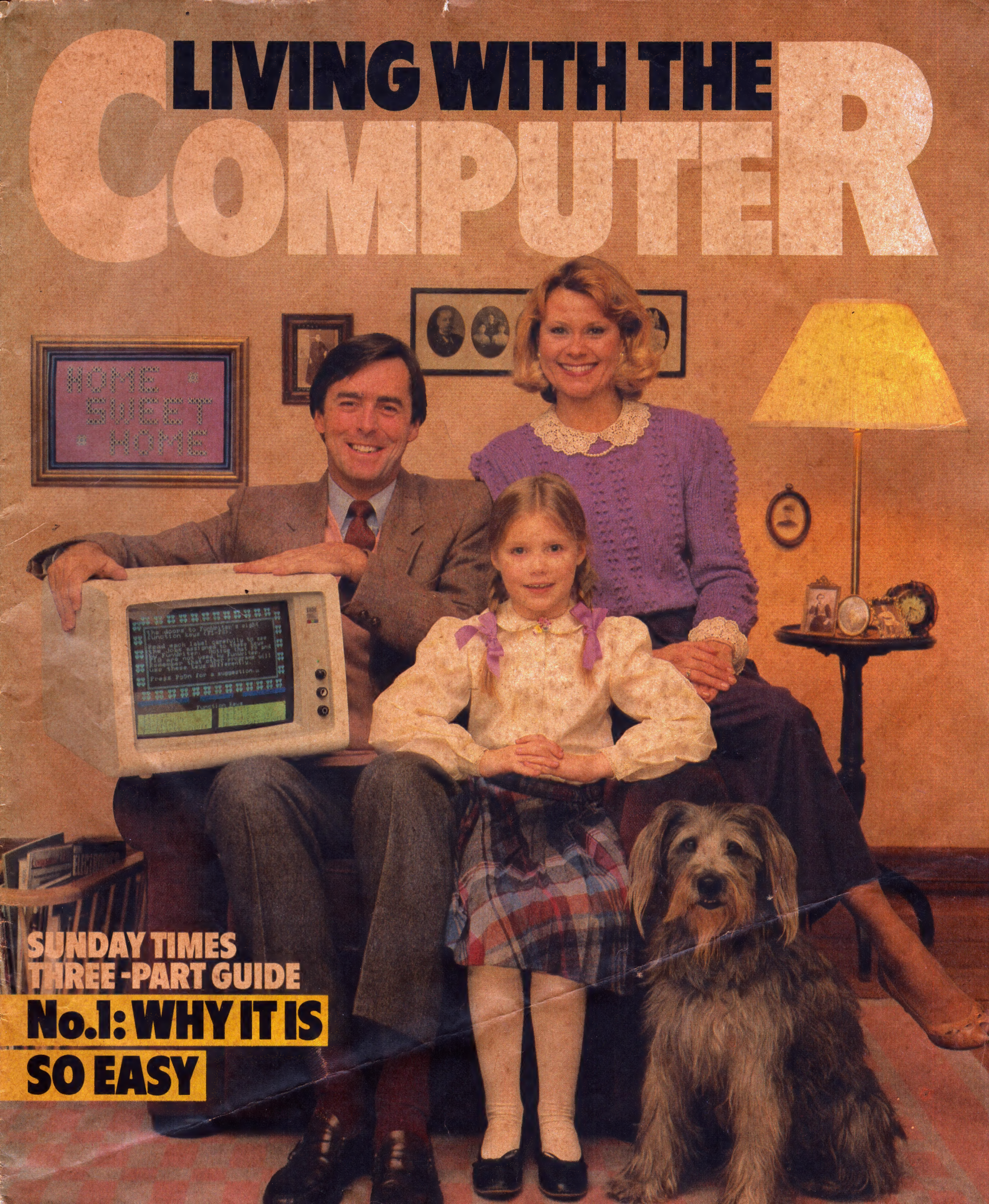
LIVING WITH THE COMPUTER



SUNDAY TIMES
THREE-PART GUIDE

No.1: WHY IT IS SO EASY

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LIVING WITH THE COMPUTER

IF YOU HAVE MISSED OUT ON COMPUTERS THIS IS HOW TO CATCH UP

Britain has more home computers per head of the population than any other nation in the world, yet six out of seven households still do not own one. Even though people feel that they are missing something if they have no computer knowledge, and that the future belongs to those who do have this knowledge, they believe that the machines are difficult and can be used only by those who combine a knowledge of advanced mathematics with a talent for microelectronics. This suspicion is even more true of small business computers. They are, there's no doubt about it, valuable to the executive who can solve problems and try out ideas at home (and of course use the machine for calculations and preparing reports). And they could be vital to the owner of a small business, who has to battle with stock control and budgeting and forward planning. Computers are not widely used by either of these groups. But the fact is you don't have to understand a computer to use one, any more than you have to understand the principles of a carburettor to drive a car: and you don't have to learn to program a computer to use one, any more than you need to read music in order to operate a hi-fi. You can walk into W.H.Smith's or Boots, pick up a computer and a couple of programs on cassettes, and have the machine up and running half an hour after you get home. Business computers are a bit more difficult, but not much. What we are going to do in the articles that follow in this and the succeeding issues, is to show you, starting from the beginning, just how easy it is to use these machines. You'll discover how the computer itself directs you, with instructions on the screen. In the next issue, we'll suggest how you should go about choosing a computer and some of the extra devices that you'll find useful: and we'll give you a guide through the vast range of models available. In the final issue, there'll be a simple introduction to programming, and a survey of computer uses, mainly in business. The computer age is fascinating, useful and entertaining. *The Sunday Times Guide to Living with the Computer* will lead you into it. *Tony Osman*

PART 1: WHY IT IS SO EASY

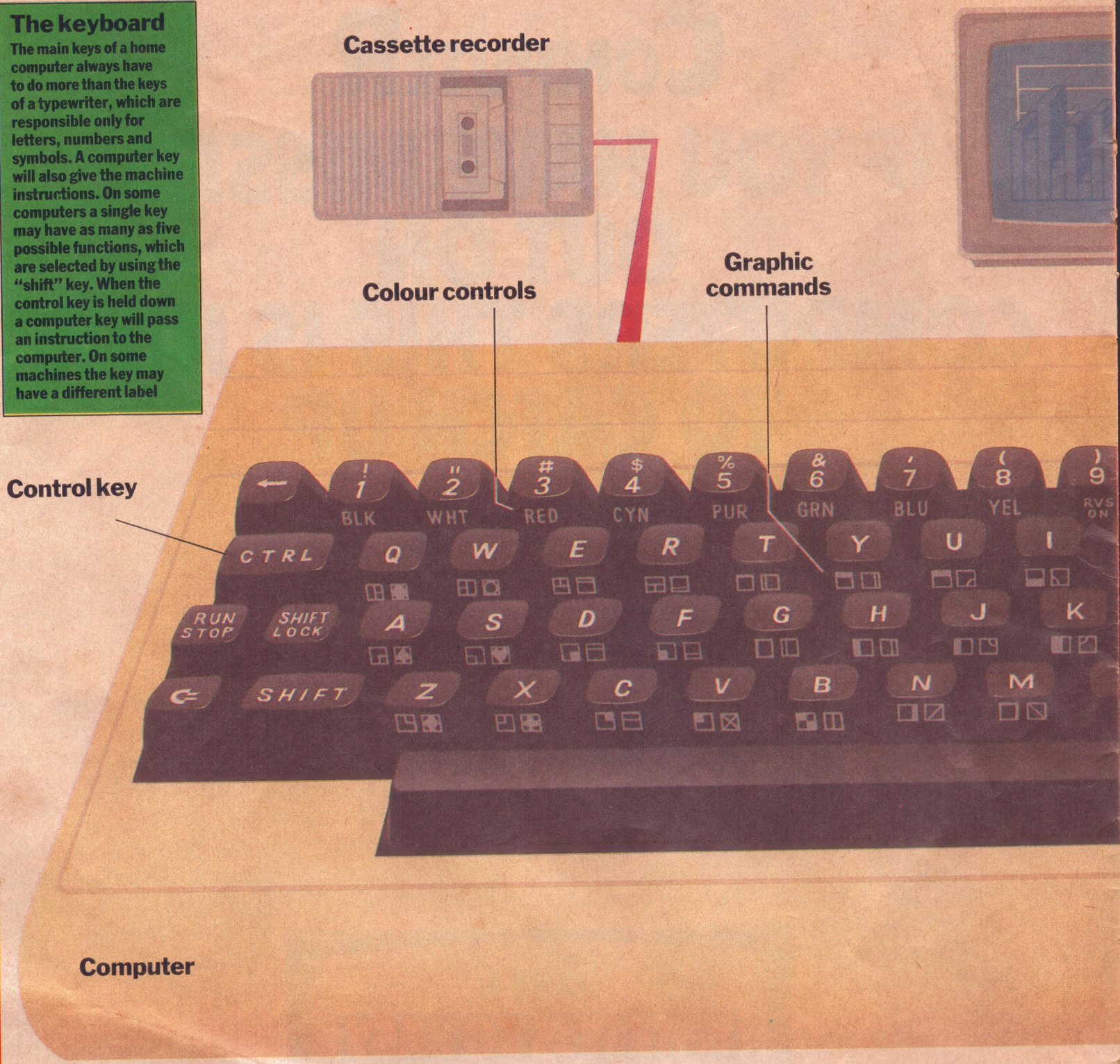
Page 4 Your home computer: what it looks like. **Page 6** Starting up: the first steps. **Page 10** Help at home: women hold the key. **Page 12** Keeping accounts: basic book-keeping. **Page 17** Computers at work: businesses that benefit. **Page 22** New words you need to know

COVER PHOTOGRAPH: MARTY UMANS PHOTO

Editor: Tony Osman. Special consultant: Professor Dennis Parkinson, Queen Mary College, London.
Contributors to this issue: Peter Jackson, Rita Marshall, Fiona Newman, Chris Tighe. Design: Pedro Silmon

The keyboard

The main keys of a home computer always have to do more than the keys of a typewriter, which are responsible only for letters, numbers and symbols. A computer key will also give the machine instructions. On some computers a single key may have as many as five possible functions, which are selected by using the "shift" key. When the control key is held down a computer key will pass an instruction to the computer. On some machines the key may have a different label



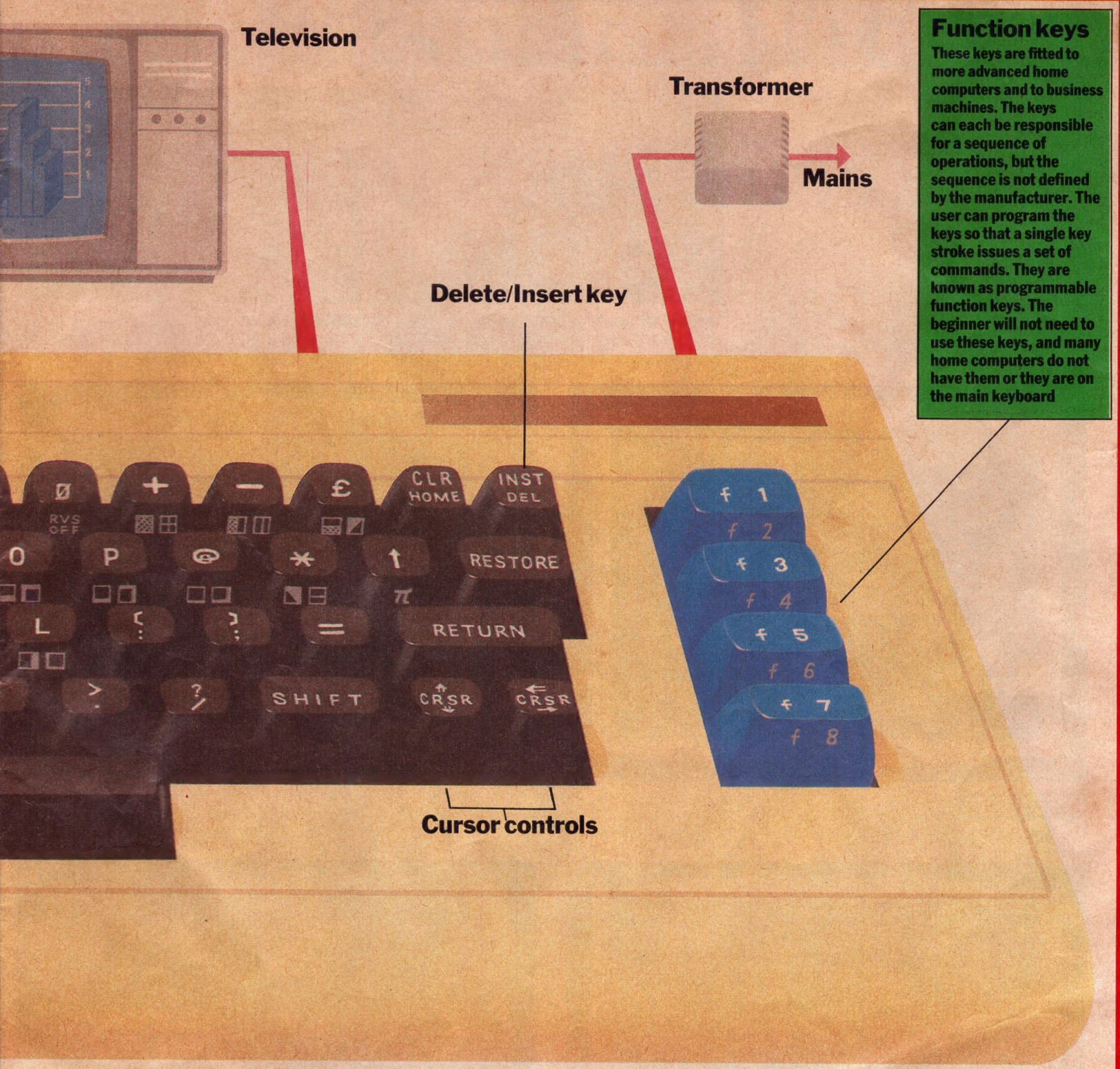
YOUR COMPUTER ALL READY FOR USE

A home computer looks something like this – a plastic box with a keyboard set into the top of it. You don't need to know what's inside it, but these are the few things you do need to know before you can begin to make it work

This is a typical home computer. Most cost from around £100 and come with a transformer to plug into the mains. Because it consumes only as much electricity as a 60 watt bulb, it can be plugged into the same adaptor as the cassette player and TV it also needs to make it perform.

What you can see is a keyboard that looks a lot like a typewriter. It has letters and numbers arranged in the conventional way, and it will probably have a number of extra keys. But you can't see the computer itself: it is under the casing. There you will find the microchips that are the memory and "brain". The memory stores instructions and information, and the brain works on the information by following the instructions you give it – it answers questions and works out calculations.

This memory is the Random Access Memory (RAM) and the bigger it is, the better. A large RAM holds more information and instructions than a small one. The capacity of a RAM is measured in thousands of



Function keys

These keys are fitted to more advanced home computers and to business machines. The keys can each be responsible for a sequence of operations, but the sequence is not defined by the manufacturer. The user can program the keys so that a single key stroke issues a set of commands. They are known as programmable function keys. The beginner will not need to use these keys, and many home computers do not have them or they are on the main keyboard

ILLUSTRATION BY JOHN GRIMWADE

bytes – a byte is roughly equivalent to a single letter or numeral. A typical home computer's RAM holds 16 thousand bytes, referred to as 16K.

The computer's memory is erased every time the computer is switched off, so it needs a permanent memory. For home computers, this is usually the tape of a conventional **cassette recorder**, which is easily connected to a socket on the computer.

From around £5, you can buy cassettes that contain programs for games, education and business. These are much more complicated than any program you are likely to write yourself in the next couple of years: but the whole point about computers is that you can use a program without knowing how it was written. You just have to check that it was written for the computer you have. This is marked on the package.

You use the keyboard to give the computer its instructions – the program – and also to give it the information to work on. Because you have to type in ordinary words and numbers, and also instructions, the keys have to do more than the keys of a typewriter.

There are keys used to describe shapes and patterns – these are **graphic command** keys. Most home computers can produce words and images in colours, so there are keys – **colour controls** – that tell the computer what colours to use on the screen. The makers of computers know that you will make some mistakes in typing, and have fitted a number of keys in order to help you to make any corrections.

Firstly, there is always a **delete** key, which removes what you have just typed. But the more fascinating keys are the **cursor** keys. The cursor is a small mark that appears on the screen and travels along the text as you type. You can move the cursor into the programs or information that you have already typed and you can then make corrections at the place you have moved the cursor to.

The computer usually displays the results of its work on a "monitor" or **television** screen. On most home computers, you actually use your TV, which is connected to a socket on the computer. Home computers can usually produce displays in colour, and for this you need, of course, a colour TV. However, they will work perfectly well on a black-and-white TV, and you can start by using a cheap set.

With this simple equipment – computer, TV, cassette recorder and program, you are ready to start running a program. Turn to the next page to find out how.

TAKING THE FIRST STEPS

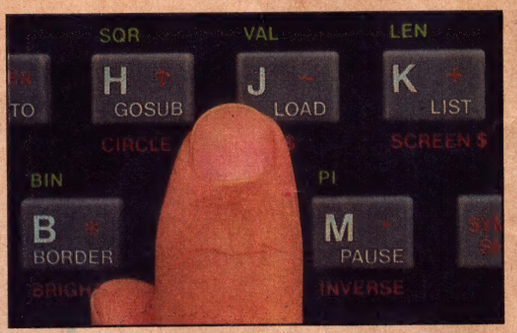
If your computer is to work, it first needs line by line, but to start with you can use a easy to use. The starting instructions are

Starting the Program

1 Insert cassette
2 Rewind cassette, if necessary
3 Press [J LOAD]
4 Hold down [SYMBOL SHIFT] and press [P PRINT] twice
5 Press [ENTER]
6 Press play on the cassette recorder
7 The program will now start to load

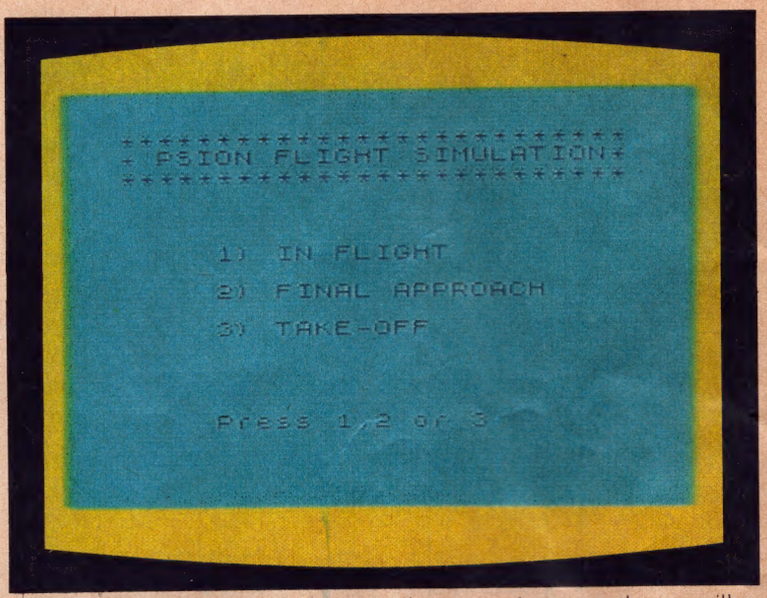
THE PROGRAM The instructions are on the cassette. You have to chose a program "written" for your particular computer as they vary slightly

TUNING IN Switch on the computer and TV, which may need adjusting to pick up the computer's signal. Put the cassette in the player

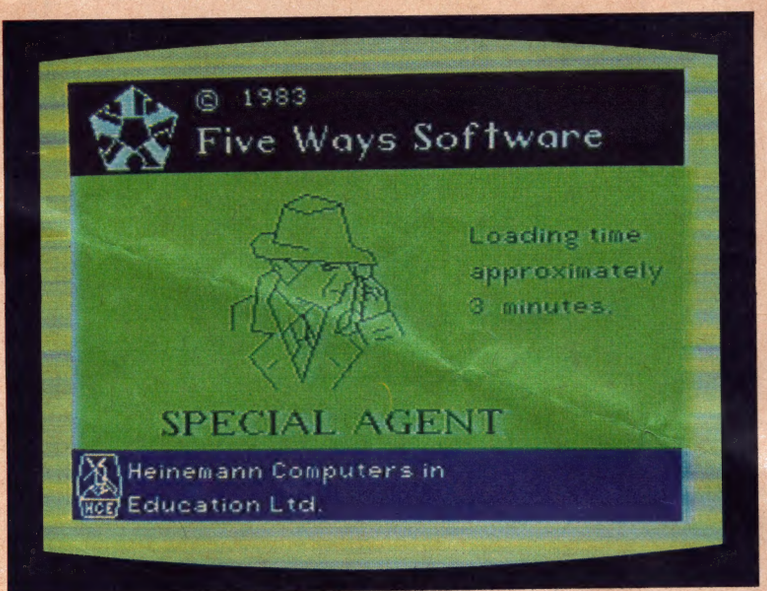


LOADING (1) Some computers have a single key that instructs the machine to load. When the key is pressed, "LOAD" appears on the screen

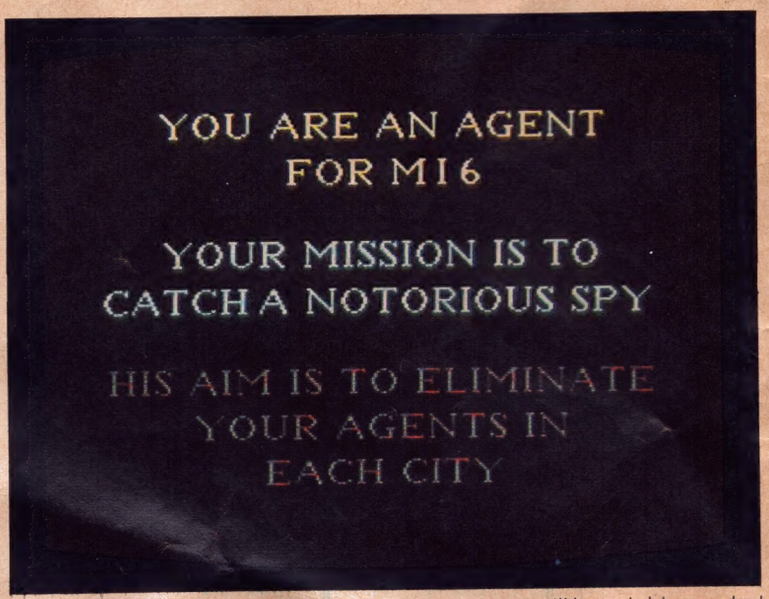
PILOT TEST The name of the program will now appear on the screen: it may say "loading". This one tells you to leave the tape running while the program is loading. Then you can stop the tape



In this particular educational game, the computer presents you with a "menu" – a list of questions. Menus are common in computer programs and make it easy for you to choose what you want the computer to do next



SPY PLOT To play this educational game well, you need to know the geography of Europe and to be able to work out calculations involving routes, timetables and money that you will need for your trip



The beginning of the game. The cassette package will have told you what the game is about. The computer will take you through it, giving you the information on which you will then have to make your decisions

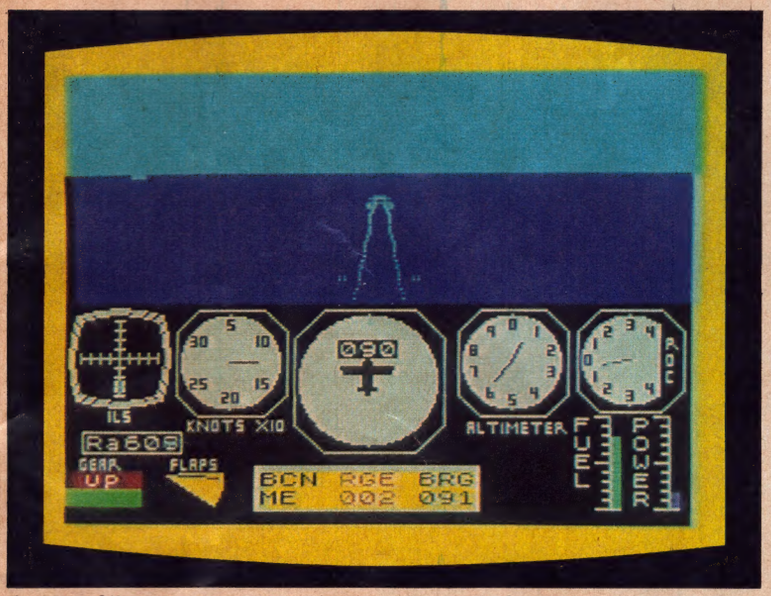
PHOTOGRAPHS BY ALEX DUFORT

instructions. A program lists the instructions in order. We will be telling you in a later issue how you can write your own program, program written for you, like the two we have used here. For home computers, these usually come on cassettes and are extremely printed on the box or the cassette and the running instructions are displayed on the screen as it runs. Pick up your cassette and go

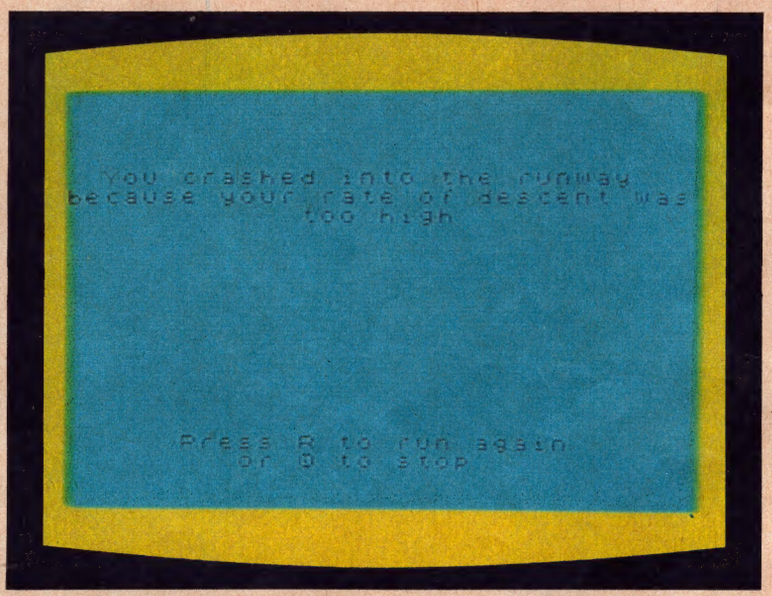
LOADING (2) With other computers you load the program by typing the word "load", letter by letter. The word will then appear on the screen

PLAY Put the instructions into the computer's memory by using the "RETURN" key. Press the "play" button on your cassette recorder

RUN Once the program has been entered, it will stay in the computer until needed. To RUN it, either type the word or use a special "RUN" key

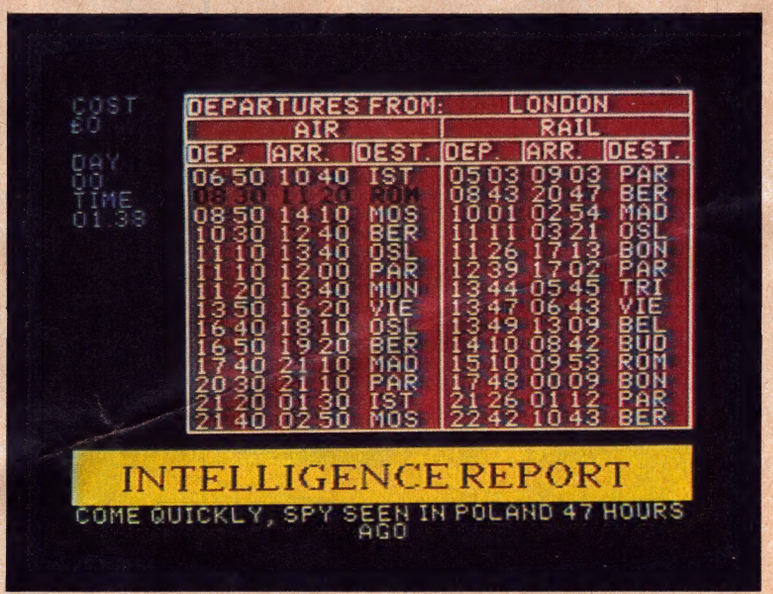


A view of the runway as seen by the pilot, and of the aircraft's instrument panel. You have to control the aircraft, using the computer's typewriter keys as instructed and watching the instruments so as to land the aircraft safely



Finally, the computer tells you how you did and, in this case, what you did wrong. A short menu gives you the option of trying again or ending the game. Elaborate versions of this simulation are used to train pilots

A scene from the game. The figures on the left tell you how much you have spent in your pursuit, and the time that has "elapsed" since the story began. The Intelligence Report from Europe locates your target in Poland



The information you need to move on to the next stage of the chase. The Intelligence Report is updated and there are timetables for air travel and for the more economical trips, for poor British agents, perhaps, by rail

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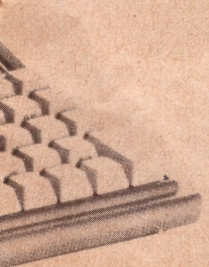

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WHY WOMEN HOLD THE KEY

Advertisers are guilty of giving computers a masculine image but the main beneficiaries of the new technology may yet turn out to be women. Once installed, a computer can become a focal point of family life and take care of many routine concerns

Jim and Valerie Emmerson bought a computer for their eight-year-old daughter Lucy. Now Valerie finds it indispensable for running

Until now computer manufacturers have pitched their sales campaigns at only part of the market. By appealing to businesses, to men and schoolboys, they have ignored its myriad uses in the home. A computer should be the social secretary, housekeeper, accountant and leisure organiser to run the family as efficiently as any office.

In most cases it is the woman of the house who is the "communicator" of the family, keeping tabs on birthday dates, family records, writing the complaint letters to the gas company. So what other kind of things can she use a home computer for?

▶ Keeping track of all the family personal finances; calculating and monitoring the budget (after all, she actually *spends* most of the money that comes in).

▶ Becoming an efficient and economic hostess by translating the quantities in menus to give exactly the right amount of each ingredient for any number of people. A computer will also convert from metric to imperial, or vice versa.

▶ Keeping a complete, running health record of the family. Everything is in one place when forms have to be filled in, or when you need to give a catalogue of coughs and sneezes to the GP or even find your National Health numbers.

▶ Setting up an efficient rota for, say, baby-sitting or ferrying the children to school; forming and running a club from home, building up a data base of addresses, meetings, minutes and general administration.

▶ Working out ways, by using special programs, of reducing heating bills.

▶ Always having a record in the memory base of official letters which can turn out to be as vital as the letter itself.

▶ Keeping a check on the garden, its plants and their colours and their growing seasons.

And that is only the tip of the computing iceberg. Dragon Computers recently asked readers of their magazine *Dragon World* for unusual, creative uses of their home computer. "We got some amusing and some very imaginative ideas," they said. "One reader has converted knitting patterns to alter the measurements; another has worked out a program for cottage industries. A lot of people can become professional working from home with a program that works out the cost of each job, tells you whether it is worth bringing in someone to help out, and when; or whether, in fact, it is going to be cost effective to do the job at all. A computer is also an enormous help in running catalogue selling. It gives an instant up-date on orders and payments."

One of the cleverest suggestions was the lazy person's way to re-arrange the furniture. Instead of heaving it all about and finding that one bit just will not fit in, you use a light pen on the screen and move it in as many configurations as you like – all from the comfort of your armchair. The man from Acorn, manufacturers of the BBC Micro, the favoured machine in schools and a popular seller, agrees that women should have the benefits of home computers brought home to them much more quickly "We are just seeing the beginning of a time when women will begin to accept them, find good uses for them, and make them work just like any other household aid. This will begin to open up more when computers are linked into networks, so that women can shop from home, and when the computer can be used to control other household gadgets."

There is, in fact, a positive plethora of programs on most things from cooking to keep fit and health programs, gardening, and even "computer dating" – but they don't always fit the machine you have chosen.

For a Commodore VIC 20, for example, here is *Total Health*, which keeps track of the calories you eat – and how far you have to jog to burn them off. It gives a balanced plan of diet and exercise. There is also *Composer*, a music composition program with which a user can write melodies using musical notation and sound. With a Datacassette recorder, the "songs" can be saved and recalled to the screen later. *Sprintyper* is a typing course, offering 356,625 different sentences to be typed. Make a mistake and the computer screams and, at the end of a burst of typing, it will tell you the best time, average number of errors and peak typing speed.

The Acorn can give you a basic word processing program, a desk diary, with address book, a day planner (with built in alarm signals) and a personal money management program. Acornsoft, the software outlet, offers *Shirley Conran's Magic Garden* – ask it about shrubs and flowers and feed in details of the soil, which direction the garden faces, what colours you want and so on and it will tell you which of 55 flowers and 47 shrubs will do best. There is *Membership Manager* for the woman stuck at home who wants to run a club, or a group for baby-sitting; *Collectors' Catalogue*, for storing records.

The cost of most of these programs is around £10 to £11.

THE EMMERSONS

The Emmerson family of Deal, Kent, chose a Dragon 32. They bought it for their daughter, Lucy, who is eight. "I spent one hour on it because I had to," said Valerie Emmerson, "to keep up with Lucy and my husband, Jim. Then I spent every minute I could over the next 24 hours on it because I was so interested. I had absolutely no idea that we could all find a use for it. Lucy, of course, mastered the basics much sooner than us, but when we worked our way through the instructions, I couldn't believe how much we could actually *do* with it. We started with our personal finances, then I put in an up-to-date log of addresses for birthday cards and for the regular letters that we need to send."

The Emmersons run a very busy, seven-day-a-week cafe on Deal seafront. "Now that we have a home computer, we realise what a help it is going to be in our business. A lot of groups come here in coaches – we can monitor the bookings and work out the number of staff required at any given moment and keep a log of special

their home and their seaside cafe

meals a lot more efficiently than having to consult two or three sets of books; we can log our bed-and-breakfast bookings and feed in all the little details about our guests that are so important to remember – like early calls and breakfasts for the fishermen, those who will want dinner, packed lunches, or need to be given more than just one loud alarm call!

"We can keep a much stronger control over stock with this machine. And we can have the proper selection programme of staff records, VAT and everything else in a small business like ours which up to now has had to be laboriously – and usually untidily – kept in books or on paper.

"I really don't understand why nobody has convinced me about computers before. There are lots of families like us. We need to make sure our children have a computer to use at home, either for constructive games or for educational programs. But when you run a business you also know that expensive equipment isn't earning its keep unless it is really working most of the time.

"I wish two things. One, that the manual was easier to follow (but the man in the shop we bought it from is helpful. I've been in lots of times and he's very patient). And, two, that somebody had told me how marvellous personal computers were before – I mean, persuade me that I would actually enjoy using it."

She wishes, too, that she'd known about the other Dragon user who worked out the system for moving furniture. "We've just moved into a new house and it is very difficult to stand in a shop and work out what size furniture is going to fit into a room."

PHOTOGRAPHS BY DAVID REED

Steve Williams with kitchen hardware and the menu programs he designed with his wife Maris

THE NORBURYS

The Norbury family of Coulsdon, Surrey, chose an Acorn BBC model. "Frankly," said Mrs Georgie Norbury, "I was a bit frightened of it when it arrived. But I decided I wasn't just going to sit and look at it while everybody else has a go – I was determined to find ways to use it properly."

The main reason they bought a home computer was so that their daughters, Clare, 17, and Joanne, 15, could get used to them before they go out to work. "Whatever they do, you can bet that they will come into contact with computers one way or another. We want them to be prepared. But I never realised that I could do so many things with it as well."

Now she sees the computer as part of the family – "something we can all do something with. When my daughters bring all their friends round, instead of listening to loud music or just watching television, we all play games. I thought all the games were like *Space Invaders*, but we have found games which really make you think. *Kingdom* is one where you have to make decisions about how many people you keep in a village and how many you need in the fields to protect the village from the thieves in the hills. If you all survive one year you can move on to the next year. I've got up to three years so far and it really is a challenge to see which one of us is going to 'survive' the longest."

Georgie and Tony Norbury with their teenage daughters Claire and Joanne: the computer has become part of daily family life

Her husband, Tony, has formed a small Acorn club at work, to swop ideas and software; Mrs Norbury wants "to get all the addresses on it, so that next Christmas I'm not scrabbling around in diaries and trying to find old envelopes. I'm going to write a part of a letter every time something interesting happens in the family and build up a year in the life of the family. Then, when we get a printer, I'm going to send copies of this diary to all the friends we don't see much of during the year."

They have a holiday home in the Canary Islands and the computer "will put an end to never knowing when it is booked and when it is free. I'll feed in all the dates, and, at the same time, bring the information sheet we give friends up to date, as we find new restaurants or shops, or when flight times are changed."

Like many wives neither Joan Emmerson or Georgie Norbury had really used a computer before, though Georgie Norbury had used a video display terminal at work for a time but found it "just like typing". They first met the alien animal when their husbands bought one for their children. As it happens, the machines were bought for girl children. Neither of them thought they would be interested, but after two weeks they were both "hooked" and words like "data base" and "system disc" and "software packaging" and even "programming", were slipping naturally and easily into their vocabulary.

THE WILLIAMSES

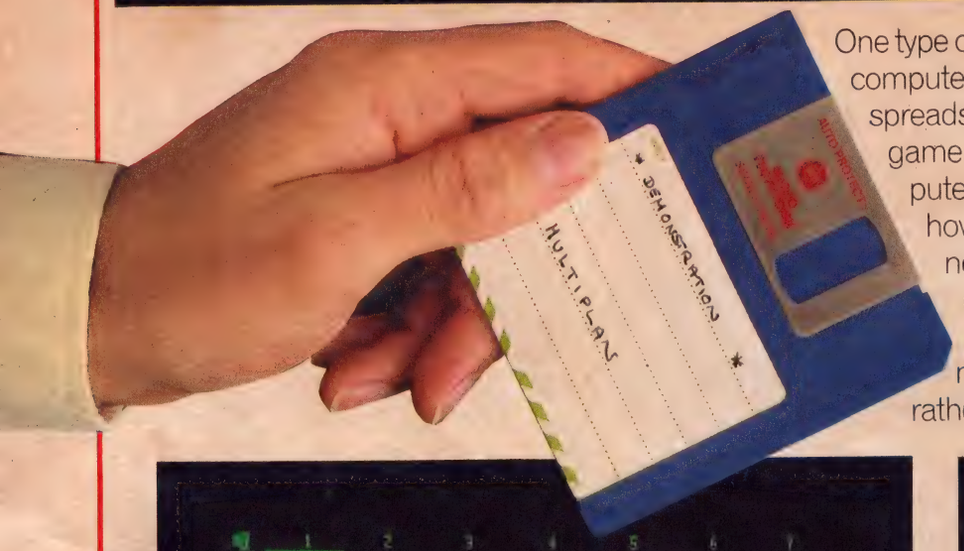
Steve and Maris Williams of Pickhill in Yorkshire have a Sinclair 48K Spectrum and they began creating programs for their own recipes "to get away from all the games," Steve said: "I felt I wasn't making full use of the computer's potential." The recipes have proved popular, and he now markets them on cassettes.

By telling your computer what you have in your larder and fridge, it will come up with suggestions of how to make them into a meal. "It's easier than having to use your imagination," said Steve. "A lot of people will just cobble together a meal because they can't think of anything better to do with what's to hand." Alternatively, cooks can plan their menus and shopping lists using the computer in the same way as a recipe book.

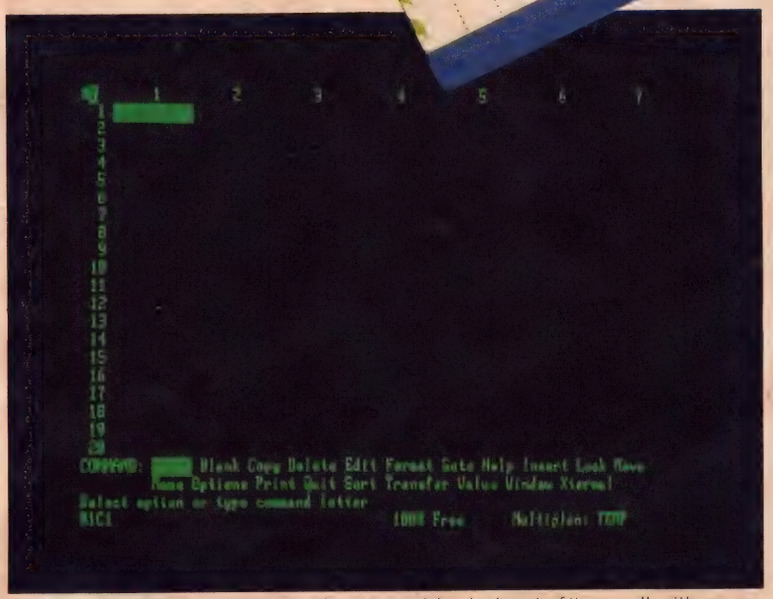
Assisted by Steve's computer programmer brother Paul, the Williamses have so far produced three computer cassettes for cooks, on wholefoods, Continental cooking and quick recipes. The 74 recipes on each cassette are based on a list of 30 ingredients such as cheese, eggs, mushrooms, potatoes and steak. The computer assumes that basic "store cupboard" items are already available. The cook just moves a cursor across the screen to pick out which of the 30 ingredients he or she has and the computer selects the recipes. Some, like prawns Louisiana, sound elegant, while others, such as bacon pilaff or spinach and carrot savoury, are more homely.

Steve and Maris believe the cassettes, which are now being sold by mail order, show that there is much more to computers than just playing games.

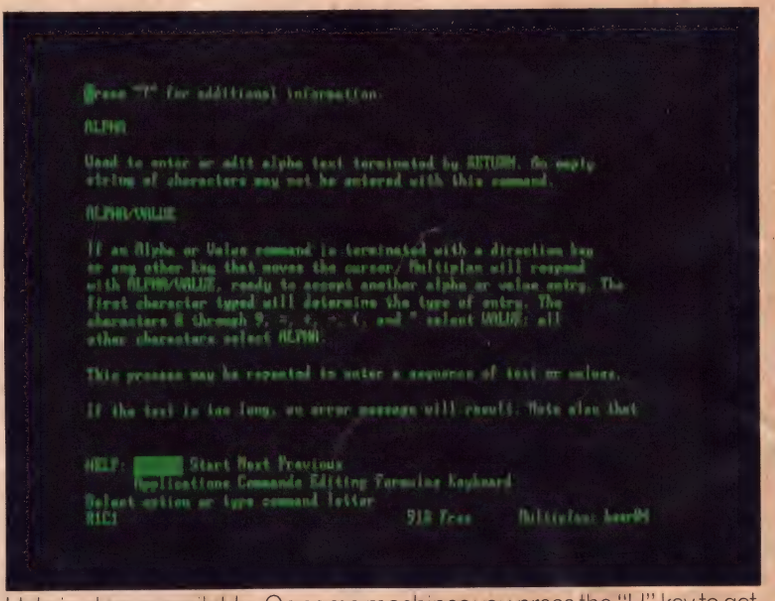
THE BASICS OF BOOK-KEEPING



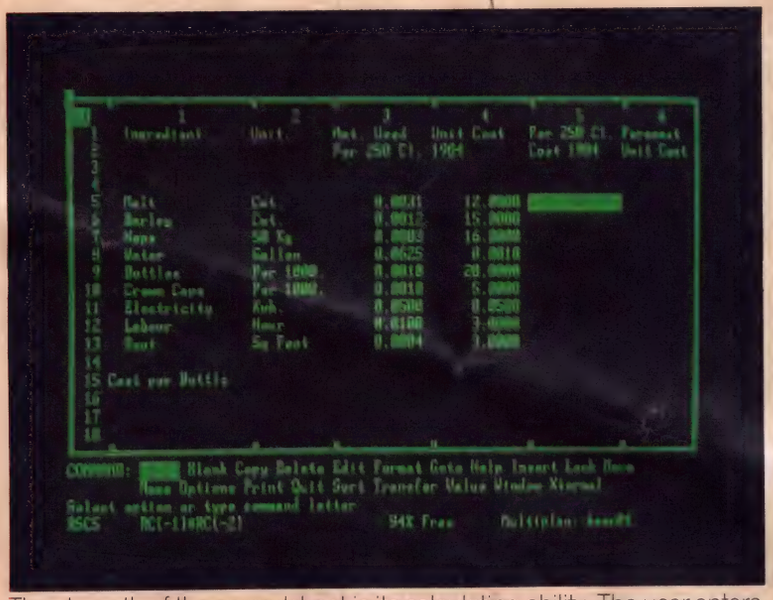
One type of microcomputer program, the spreadsheet, has sold more computers to business than any number of technical features. A spreadsheet on a business computer is almost as easy to use as a game on a home computer. We shall be looking at business computers in greater detail in the next issue, but by showing you here how a spreadsheet works you will see the kind of thing a business computer can do. The basic difference between a home computer and a business computer is that a business computer is designed to handle more information. For this, it needs to store its much larger programs on floppy disks, rather than cassettes, and these are usually inserted directly into



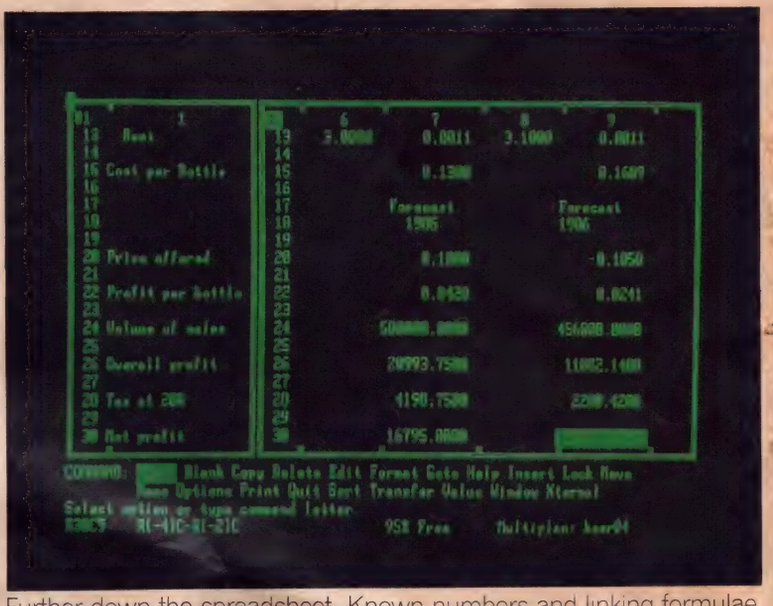
The opening display appears showing a blank sheet of "paper" with numbered columns and rows. The cursor, the light green oblong, top left, can be moved round the sheet to each cross-referenced location, or "cell"



Help is always available. On some machines you press the "H" key to get it. In this case help for an explanation of the Alpha command – which governs words rather than numbers on this program – has been asked for



The strength of the spreadsheet is its calculating ability. The user enters "formulas" that link cells automatically, making multiple calculations at the touch of one key. Columns 3 and 4 are multiplied to make column 5

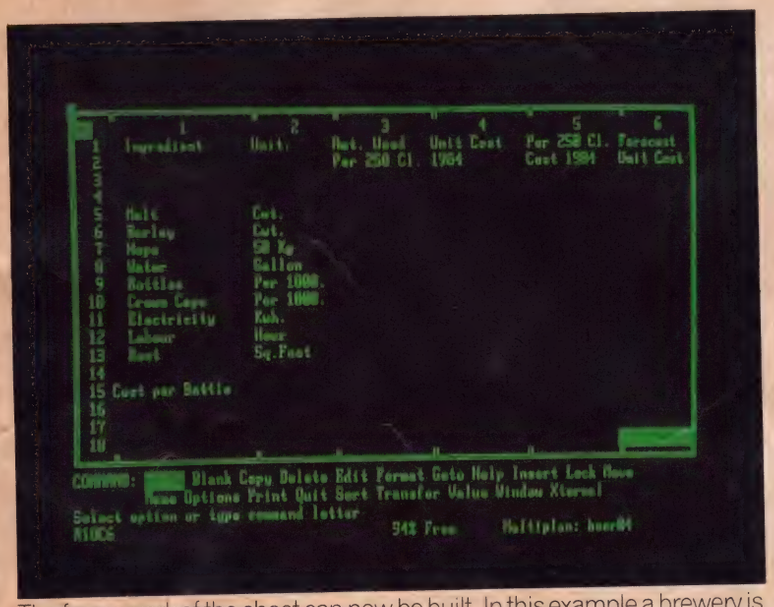


Further down the spreadsheet. Known numbers and linking formulae have been entered. The sheet has been split into two "windows", omitting four columns not needed. The sheet is larger than the part displayed

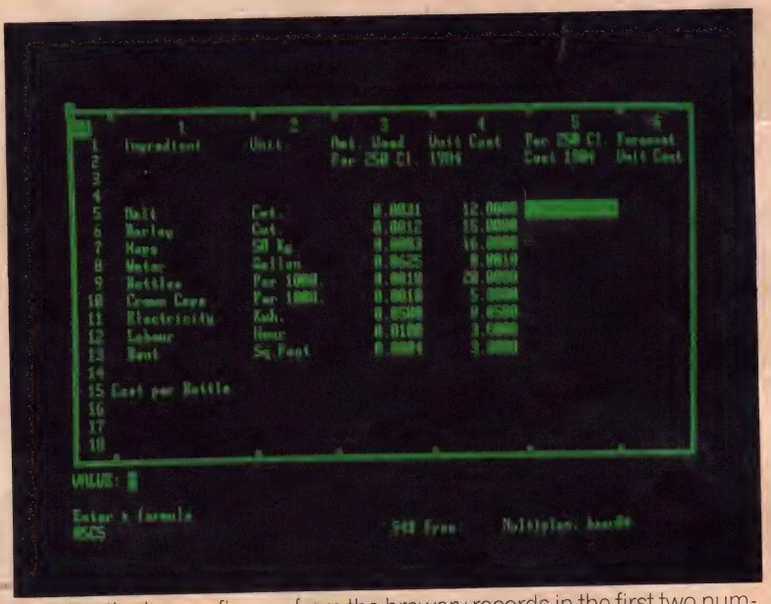
PHOTOGRAPHS BY ALEX DUFORT

the machine. A spreadsheet program, which costs from around £200, lets the business user build up an actual picture of his or her activities and then see the effects of any prospective change in policy, pricing, margins, tax or anything else. This gives the user a "What if?" choice of questions to put to the computer which can then shape the company strategy by showing what the results of a particular decision or event would be. The example used here is the effects of raw material at a brewery and the proposed question is: "What will happen to costs if the price of barley goes up to £35 in 1986?"

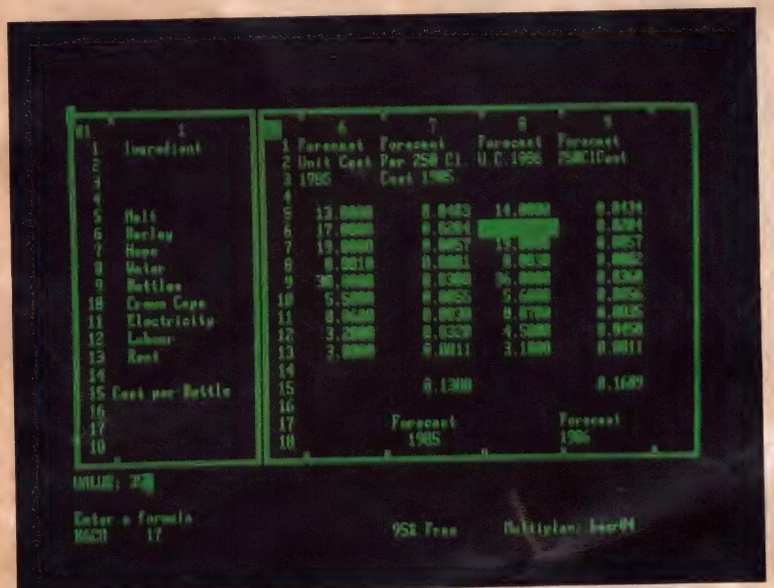
LOADING To load a program into a business computer, all you do is just push in the disk and press the key marked "enter"



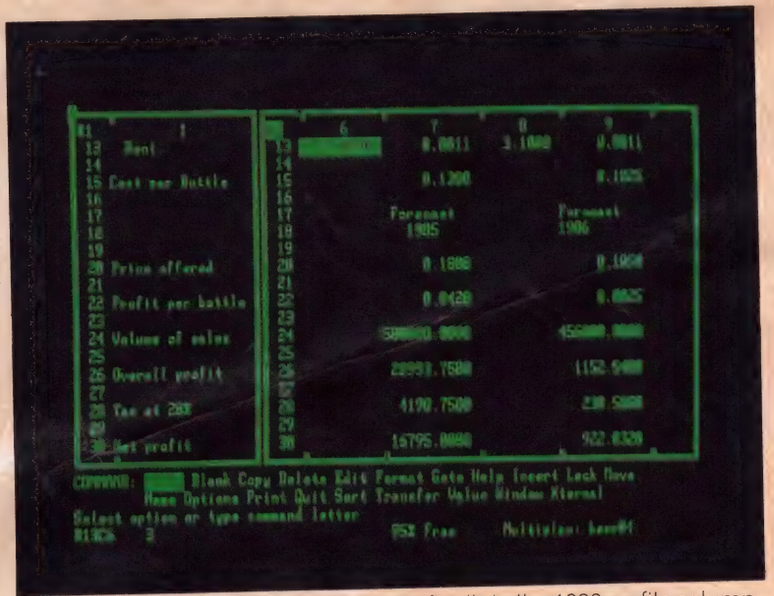
The framework of the sheet can now be built. In this example a brewery is working out its manufacturing costs, and each heading typed in, followed by the quantity, after moving the cursor to the appropriate place, or "cell"



Entering the known figures from the brewery records in the first two number columns is done in the same way, moving the cursor to the "cell" and then typing them in. The cursor is now ready to start the next column



The real purpose is to ask the "What if" questions. Here the projected cost of barley in 1986 is being raised to £35. The computer uses the formulae to recalculate the whole sheet, and all the figures then change automatically



The result of this one change shows up finally in the 1986 profits column. Any figure in the sheet can be changed at any time, and the computer readjusts to show the effects. This information can shape company decisions

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MAKE MONEY WITH YOUR MICROCOMPUTER

Most people buy a micro *either* to play games, like 'Invaders', on it . . . *or* to learn more about computers . . . *or* as an educational aid for their children. But now, there is another — **potentially far more exciting** — way to use your microcomputer.

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New Guide Tells All

"Make Money With Your Micro" is a new, working manual that answers all these questions . . . and a lot more besides. Like **how to set up a small computer business** . . . what books to keep . . . when to call in professional help . . . how to arrange your workspace to maximum advantage . . . why *the right micro based business can be unusually profitable,* and what you need to climb on the bandwagon . . . before it really gets rolling. Here is a brief sampling of what else you can expect to learn from this special report:

What You Will Learn

* **Where to find customers** . . . and what to offer them.
* **Why word processing is different** . . . and some rather surprising, little-known, ways to make it pay big.
* **How to save businesses money** . . . and make yourself a small fortune in the process.
* **Which number services pay best** . . . and how to perform them efficiently.
* **Where to get referrals** . . . and why they matter.
* **Managing your time** . . . always important, but vital if you plan a part time operation.
* **Preparing mailing lists** . . . why this is potentially one of the most profitable services you'll be offering.
* **And much, much more.**

Where Do I Find Customers?

In addition to taking you through the very necessary steps that precede any truly successful microcomputer-based business, **"Make Money With Your Microcomputer"** gives you the low-down on exactly which businesses want what services, and how best to get these firms as big paying customers.

Working from this profession-by-profession section, **you can find several openings available right now to suit your circumstances** — areas where you, with your micro, can really *coin* money . . . giving people and businesses in your part of the country what they want and need to become more efficient . . . and, therefore, more profitable.

Do I Need Capital?

You don't require any 'capital' as such to get started in this microcomputer business . . . remember, what we are talking about here is primarily a service industry. You can work from home, in your own time at your own pace . . . starting with just a couple of evenings a week only, if you like. There's no need for 'staff' . . . *your micro does the hard work for you* . . . and your 'office' is already paid for because this, more than any other business in the world, takes very little space . . . almost any quiet corner will do.

Must I Be An Expert?

It really doesn't matter if you don't know a lot about computers, because there are plenty (almost too many!) 'ready-made' programmes already on the market . . . most of them with built-in instructions . . . covering just about every and any computer job you are likely to encounter in your new business. But, naturally, if you can design your own programmes, and that is what you enjoy, there's nothing to stop you doing so — although, frankly, the chances are there's a better, less expensive programme already in existence.

Which Micro Do I Need?

Almost any modern micro will do, because most programmes these days are — or can be made — compatible with just about any other microcomputer. If you haven't yet bought your own micro, you'll find the cost surprisingly low . . . and certainly very small compared to its earning potential. However, either way, you may need a few 'add-ons' . . . although, again, these cost very little when you consider how much money they can make for you.

An Alternative Service

If you prefer offering a service direct to the public, you'll also find in this new manual a special section devoted to areas where you can do just that. But, it's only fair to tell you now, you are likely to *make much more money helping companies* and the professions (e.g. Doctors, Architects, etc. etc.) than you ever could selling services direct to the public.

Get There First

As with any other business, to be successful you must find a need and fill it. Right now, there are literally dozens of companies and professions in your area that urgently need micro based help. The *big* money in this field will be made by those men and women, young or old, who are first to sign these businesses on as customers, and then grow with them.

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"Make Money With Your Microcomputer", the practical, working manual that can guide you into this exciting new field, costs just £10, post paid. There is a 30 day satisfaction-or-your-money-back **guarantee,** so all you are risking to find out more about what could be the fastest growing part of our economy over the next few years is a few postage stamps.

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BUSINESS SENSE

For a small business, a computer can be a large investment. Before you buy, you need to know in what ways one might make your day-to-day working more efficient. This is how three companies found systems to suit them

Computers have been sold to businessmen and women in their thousands over the past few years, bringing with them both a hope that they will be a panacea for all ills, and a fear that they are only the province of enthusiasts or experts. The truth lies somewhere in between. But most users, like the ones here, are glad they took the plunge.

The main benefit the computer brings is its ability to perform mundane and repetitive tasks. It can, for example, produce personal letters to each of your clients, as well as providing management information of a much higher quality than a book- or card-based system.

Financial planning is the most common function, using packages such as Visicalc and Supercalc that produce an electronic version of a normal accounting spreadsheet, and answering "What if ...?" questions, like the one shown on the previous page.

A computer will not single-handedly bring order to a chaotic office, but if you have a clear idea of the jobs you want it to do, there are probably software packages available that can help you out. The secret lies in finding the right software first, since not all packages run on all computers. You can either buy a package off-the-shelf and perhaps make do with any features which don't quite suit your business. Or you can pay someone to write a tailored program instead.

It is also important not to expect your system to improve your business overnight. You must be prepared to invest time in putting your existing information onto the computer first. And that's on top of the cost of the system itself – between £2,000 and £3,000 for the computer and anything from £150 for each software package. There will be a buyer's guide in the next issue.

PHOTOGRAPHS BY ROGER PERRY

Artists on tap: Tommy Tucker and Malcolm Shedden can now call up a chorus line in seconds

DANCE AGENCY

In just four years Tommy Tucker and Malcolm Shedden have built their central London dance agency, Dancers, into one of the biggest in the field. But two years ago they found that being big brought certain problems. With more than 1000 dancers on their books it was becoming increasingly difficult to match them to the specific requirements of different customers.

"We can submit more than 100 people for auditions for any musical and if there is a specific requirement I can choose the dancers simply by looking at the photos on the wall," explains Tucker. "But if the requirement is very specific and the job isn't going to pay a lot, we would say no. It wouldn't be worth our while going through all our files."

With as many as 30 calls for dancers coming in on a busy day they decided that the answer lay in a computer and they began their search for a suitable system.

They replied to advertisements from five large computer companies but were disappointed by the slow response, and worried by rumours of poor after-sales service. In the end they were sufficiently impressed by a presentation from a company in London called Spartex to consider seriously the system it recommended – an ACT Sirius computer and a database management package called DMS (Database Management System). Both partners went on a training course run by Compsoft (which wrote DMS) and saw for themselves that the software could do the job.

DMS allows the partners to feed in details in up to 60 categories to form a record of their dancers and then to retrieve these records. They can, for instance, look up all the dancers who are under 6ft and good at tap dancing. The agency uses only 26 of these categories at the moment which leaves plenty of room for expansion. They can also check up on a dancer's availability by putting a special grid over the screen display, which shows up the bookings for the next three months.

The system cost £4,710 including computer, software and a two-year maintenance contract for £620, so that if the Sirius broke down they were guaranteed a replacement machine while theirs was being repaired.

The switch to the new technology went smoothly, although the partners made sure they had some help with feeding their existing records into the computer. "We did it whenever we had the time, but our dealer also found a girl who came in for two days and did half the female clients," says Tucker.

Tucker is full of praise for the new system because it means they can search quickly to find a dancer to meet even the most specific requirements. "Sadler's Wells rang us, for instance, because a girl had dropped out, but the costumes and shoes were already done so they needed someone exactly the same size. To find someone manually would have been impossible, but we got a girl the job," he says.

RURAL HOTEL

An isolated hotel in Snowdonia may seem an unlikely setting for a microcomputer. But Pat and Barry Thorogood, owners of Cornelyn Manor, have been using computers to help run their business more profitably and efficiently for three years. When they set up the hotel nearly five years ago it had an annual turnover of £15,000. Now, by running management training courses either for individuals or groups of employees from companies such as Sainsburys and Plessey, the Thorogoods have built up to a turnover expected to be £400,000 this year.

When the business was starting up, the Thorogoods decided that they needed to keep tighter control of their two bars than a manual system allowed. "It's important that we have this control because we only get a weekly delivery. We can't just nip out and get beer from the pub around the corner because the nearest town is six miles away," says Barry Thorogood.

They looked at several systems and eventually chose a package that runs on a Gemini Galaxy microcomputer, called RCS Barstock, from a local company called Rural Computer Systems.

Now, when stock arrives, delivery note details of the quantity supplied and the cost price are entered into the computer. When drink is moved into the bars a record of this is also kept. At the end of the day details of spillage, staff drinks and how much has been sold are noted down, and every month a new stock check is completed. Both sets of information are fed into the computer.

This gives the Thorogoods an accurate picture of what takings should be and what they actually are. It also gives them a re-order ▶

Taking stock: the Thorogoods in their profitable Welsh hotel

report and profitability on each item for that period.

Barry Thorogood is enthusiastic about the benefits of this system and about how easy it is to use. "My restaurant manager had never run a bar before but he learnt from the computer system," he says. "He had never touched a computer in his life and he can't even type, but he can use Barstock to produce a management report each month for our management meetings."

Last October the Thorogoods changed from the Galaxy to the ACT Sirius microcomputer – one of the biggest sellers in this country. This was because they wanted to run a new accounting package from Rural called Cashlink. Barstock also runs on the Sirius and they sold the Galaxy second hand.

Barry Thorogood now does all his accounting with Cashlink which also has a letter processor feature that automatically produces letters for overdue accounts. He can see a trial balance at any time, and because the calculations adjusts themselves automatically whenever new information is entered, he can always be sure the trial balance is up to date.

"The first step towards a successful computer system," he says, "is a desire to get control of your business and a desire to get management information quickly, so you turn on a sixpence and make decisions based on hard facts."

Kids' stuff: Anna de Saran in her Cambridge clothes shop. She had her computer program tailor-made for her specific needs

CLOTHES SHOP

Ann de Saran runs a children's clothes shop in Cambridge. Before she bought a North Star Horizon microcomputer to help her keep track of her stock, she says that she "didn't really manage". She bought the shop, called Kids' Parade, nearly three years ago but after a year she began to think about buying a computer. "Before I bought it I hadn't a clue of what I had got, what I had sold or what was lying in a dark box somewhere," says de Saran.

With no previous experience of computers, she found her visits to computer shops a bewildering waste of time. "I was treated like an ignorant housewife and blinded by technical words," she says. "But I was trained in an office and had always been gadget minded. Computers fascinated me even though I didn't understand them."

In the end she put her trust in an old friend who at the time was a director of Caxton Computers. Although she knew little about computers, de Saran knew her business well and she had a clear idea about what she wanted a computer to do for it. So she soon discovered that there were no ready written off-the-shelf packages to meet her needs. Instead, she paid her friend £450 to write the software for her and the result was a system that was exactly tailored to her own particular stock-keeping needs

Once the computer was delivered, de Saran spent a week feeding in details of her existing stock. Now new stock is entered as it arrives and each item is automatically allocated a reference number. The system also records what type of garment each stock item is, the style and size, whether it is for a boy or girl and if it is subject to VAT.

Whenever an item is sold the price ticket is saved and the details of all sold items are recorded at the end of each week. If a ticket has come adrift from its garment she can find out exactly what has happened to it by entering its details into the computer.

De Saran can also search through her stock details by manufacturer or by type of garment. The former facility is handy for telling which products sell well and which ones don't. Now she can make a switch from one manufacturer to another on the basis of hard data rather than a rough calculation.

"Now we are much more efficient because I can say at a glance that a certain garment a customer wants was never made in a particular size, and this keeps the customer happier," she says. It also gives de Saran time to do jobs she feels are more important to the business. "I don't want to spend hours and hours in my office shuffling papers, I want to be in the shop to see customers' reactions to stock."

How most businessmen view the acquisition of a computer system.

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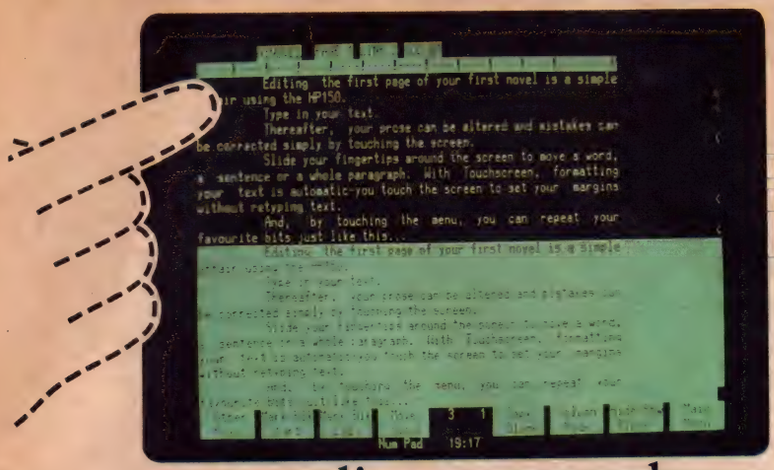
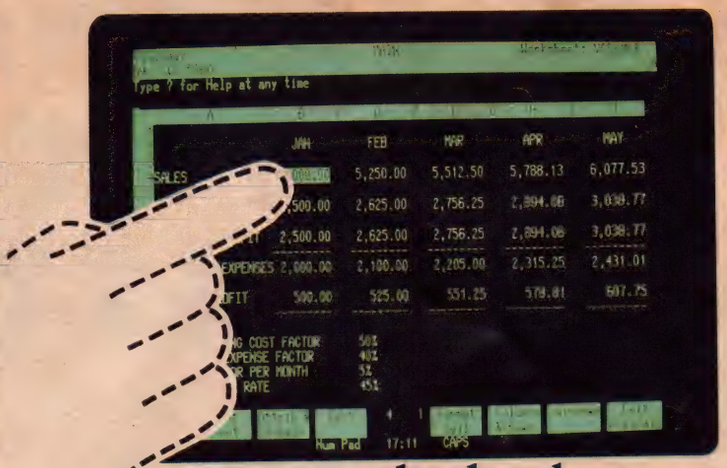
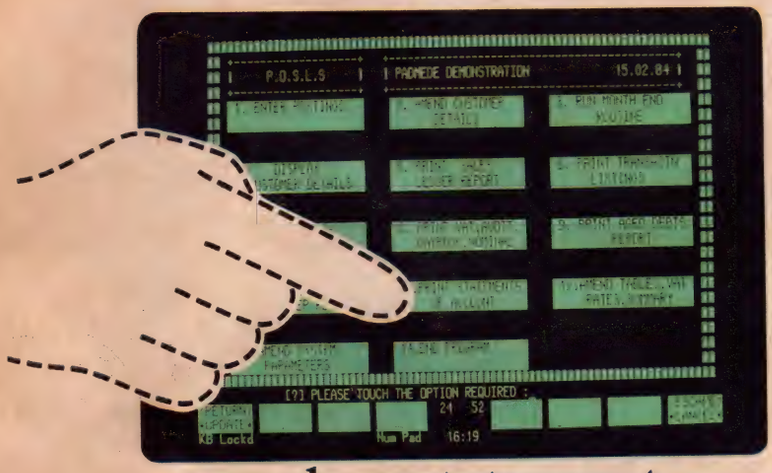


to edit your novel;



prepare the budget;



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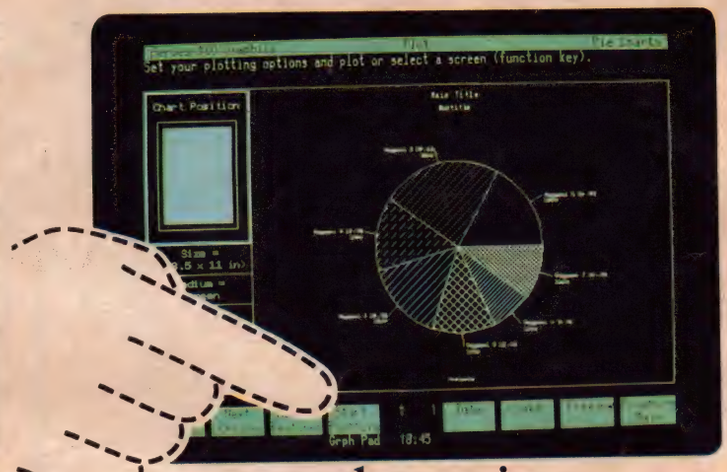
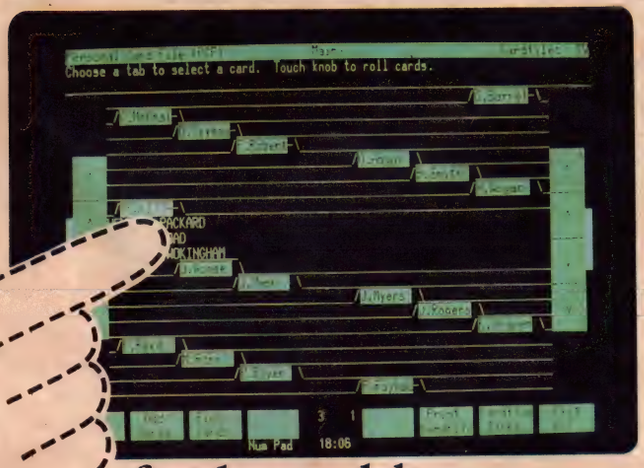
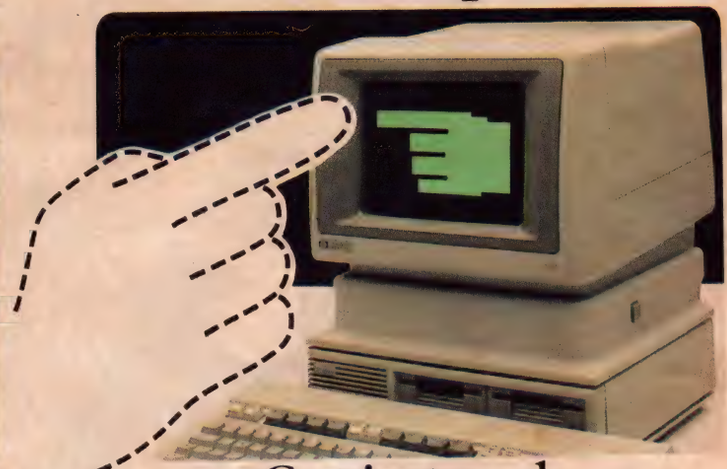


make a pie;



find an address.



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HP 150 at a Glance. User Memory: 256K-640K bytes. **Operating System:** MS-DOS* 2.11. **Microprocessor:** 16-bit, Intel 8088. 8Mhz. **Permanent Memory:** (ROM) 160K bytes. **Diagnostics:** Power-on self-testing. **Display Screen:** Touch-activated, green phosphor, 80 characters x 27 lines, 9 x 14 dot character matrix. Upper and lower case. Simultaneous text and graphics capability. 390v x 512h graphics resolution. 1024 characters and symbols in ROM. **Keyboard:** 107 keys (total), 8-ft. cord attaches to system unit, 10-key numeric pad, 12 function keys (8 screen labelled). **Compact Size:** 2.1 sq. ft. desk space. **Communications:** 2 RS-232 ports. HP-IB (IEEE-488) Built-in. Up to 19,200 bits per second DSN network link. **Peripherals:** Choice of printers (including optional internal printer), plotters, 3.5" floppy drives (264K bytes formatted), Winchester hard discs (5 and 15 Mbyte).

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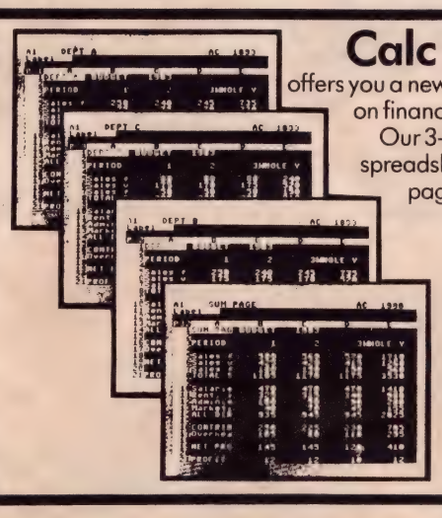

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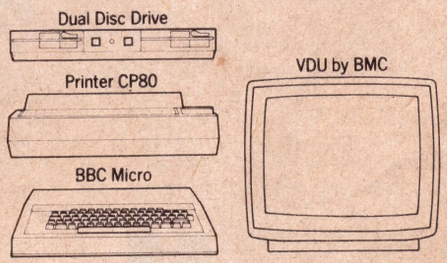

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WHAT THE NEW WORDS MEAN

Computers, like most technology-based appliances, have an off-putting language of their own. They favour American spellings with programs and disks, call television sets receivers or monitors, and assume a knowledge of typing. But there is no secret to the language, it's just a question of getting to know a few key words.

BRIAN GRIMWOOD

A

Acoustic coupler Enables you to connect your computer to others through a telephone handset.

B

Bit A *bi*nary digi*t*, the ultimate unit. of computer information.
Buffer A temporary memory store, holding information while the computer is busy.
Bug An error in a program.
Byte A group of eight *bits*, sufficient to define a character, and the unit handled by most computers.

C

Chip A tiny square of silicon 5 to 6mm square that is etched to provide the equivalent of tens of thousands of transistors. The entire growth of microcomputing depends on its development.
CPU Central processing unit. The "brain" of the computer. The microelectronic revolution has made it possible to put the functions of a CPU on a *chip* – a microprocessor. This in turn has made it possible to make powerful computers that will fit on a desk top or even be portable.
Crash A computer has crashed if it stops working and will not respond to any instruction. Often the only cure is to switch off and start again.
Cursor A symbol on the screen of a computer showing where the next character will be printed. When you are editing text it shows you where the changes will occur.

D

Database A store of information in a central computer that can be made available for other computer users. Big companies have their own databases and there are also public databases.
Disk, *floppy disk*. A permanent magnetic memory store. It looks like a small gramophone record, and is used with a disk drive and a magnetic head that "reads" the information. It is much quicker to use and holds much more information than a tape cassette.

H

Hardware The parts of a computer that you can see and touch – keyboards, circuits, chips etc. Contrasted with *software*.

L

Language Instructions are given to a computer in a stylised form called a computer language. A "high-level language" closely resembles normal speech. Examples are Basic. Cobol, Logo, Pascal.
LCD Liquid crystal display, the kind of display used on pocket calculators and watches. Some small computers and word processors use an LCD and not a TV screen.
Listing A computer program, shown on the screen or in print. One way of seeing a listing of the program that is in a computer is to use the command "LIST".

M

Mainframe A large computer, the kind that fills several offices. It is essential for processing large amounts of information. At one time there was no other kind of computer.
Matrix An array in rows and columns. The word may be used to describe one type of printer in which the letters and numbers are formed by patterns of dots. An alternative is an "impact printer" where the letters and numbers are printed by some variation on a typewriter mechanism.
Micro or microcomputer. The small computer that fits easily on an office desk. Home computers are micros, as are the computers used for small businesses.
Mini A mid-sized computer, smaller than a normal desk. It is smaller than a *mainframe* computer and, in size, comes between it and the familiar microcomputer.
Modem A device for connecting a computer to the telephone system for passing information around the country and to other countries. It achieves the same result as an *acoustic coupler*.
Monitor A specialised display for the computer that looks like a TV but does not have the circuits to receive TV programmes. A computer connects more directly to a monitor than to a television and therefore gives a clearer picture.

N

Network A group of computers that are joined by the telephone system and by special cables so that they can communicate with each other. Inside a company there may be a local area network (LAN). There are also public networks available to anyone who cares to subscribe. These can be used to send electronic mail.

P

PCB Printed circuit board. A way of making the wiring that connects the components of a computer. The *chips* in a computer are plugged into the PCB.
Peripherals Devices that can be added to a computer – printers, *acoustic couplers*, etc.
Port, *IO port* (input/output port). A socket for connecting the computer to other devices.

R

RAM Random access memory. The built-in memory that a computer uses to store programs and the information it is working on. RAM is transient and disappears when the computer is switched off.
ROM Read only memory. Unalterable memory, usually used as a permanent store of programs. Often it takes the form of a *chip* that is plugged in to the computer.

S

Scroll To move the text or picture shown on a computer screen up or down. In horizontal scrolling, the text or picture moves sideways.
Software The instructions given to a computer and the information it works on. It usually comes in the form of cassettes or floppy *disks*.
Spreadsheet A method of bookkeeping on computer. A formula connecting different columns can be written into the program, which then shows the overall effect of the change you have made.

T

Time sharing A technique that lets a number of people use a central computer. Each person has a terminal, and the computer is programmed so as to give each person the impression that nobody else is using the computer.

W

Word processing Writing and editing text on a computer. The text is first written into the memory of the computer and read on the screen. It can then be refined and corrected: words and paragraphs can be added or deleted or moved around. Substitutions can be made for words or phrases. The text is printed only after editing.

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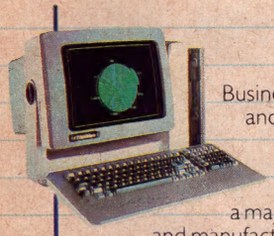
BUSINESS COMPUTERS. MOVE OVER.

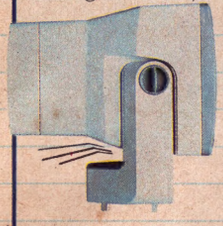


MOVING WITH YOU.

Business Computers, here and in the U.S.A., are having to move over to make way for TeleVideo. TeleVideo is a major force in the design and manufacture of micro computing equipment. And there is nothing secret about the reasons for our remarkable success. For a start, at TeleVideo we look at Business Computing from your point of view. This means that you won't find, after a year or two, that you've outgrown your system.

TeleVideo provides an unusually wide range of products – twenty at the moment – designed to allow your system to grow as your business grows. So you won't have to throw away your first portable or desk-top unit when you need network and multi-user facilities.

Equally important, at TeleVideo we consider the needs of the computer operators as much as the computers themselves. For example, the screen of the TeleVideo can be tilted – so whatever your height, you can work in comfort. Even the design of the keyboard is particularly thoughtful, recognising that hands need a place to rest as well as to operate. The more you get to know TeleVideo, the more you will appreciate why it has become the choice for companies on the move.



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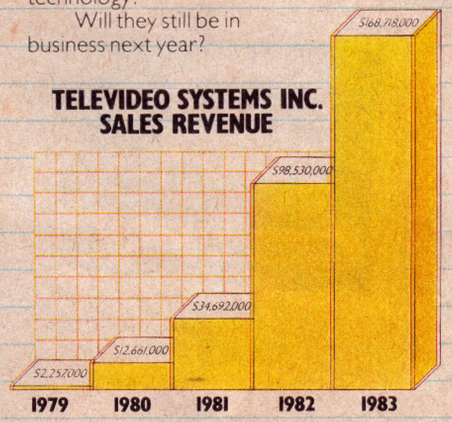
Will they still be in business next year?



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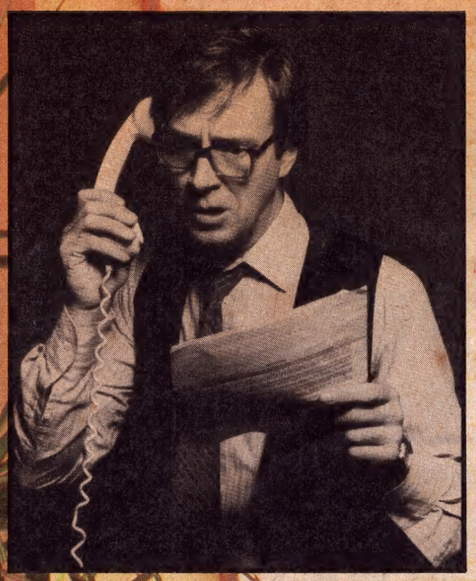

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